

REMARKS

This Application has been carefully reviewed in light of the Office Action electronically delivered April 12, 2007. In order to advance prosecution of this case, Applicants amend Claims 1, 10-12, and 14. Additionally, Applicants add new Claims 21-23, which are fully supported by the Application as originally filed. Applicants previously canceled Claims 2-3, 6-7, and 18-19 without prejudice or disclaimer. Applicants respectfully request reconsideration and favorable action in this case.

Section 101 Rejections

Claims 12 and 13 are rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. In particular, the Examiner alleges that Claims 12 and 13 “relate to a computer data signal, which fails to fall within one of the categories of patentable subject matter.” *Office Action*, p. 2. Applicants respectfully traverse this rejection.

First, when an abstract idea is reduced to a practical application, the abstract idea no longer stands alone if the practical application of the abstract idea produces a useful, concrete, and tangible result. This idea then satisfies the requirements of 35 U.S.C. § 101. *See In re Alappat*, 33 F.3d 1526, 1544, 31 U.S.P.Q. 2d 1545, 1557 (Fed. Cir. 1994); *see also State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 U.S.P.Q. 2d 1596, 1601-02 (Fed. Cir. 1998). Thus, producing a useful, concrete, and tangible result is the key to patentability according to *State Street* and other applicable case law. Claims 12 and 13 clearly recite a useful, concrete, and tangible result by disclosing “determining...that the emulated computer executable code is viral.” Therefore, Claims 12 and 13 are directed to patentable subject matter.

Second, in rejecting Claims 12 and 13, the Examiner contends that the mere fact that these claims are directed to a computer data signal means that they are non-statutory subject matter. *Office Action*, p. 2. Applicants respectfully traverse this contention. For example, it is a well settled principle of patent law that electrical signals constitute statutory subject matter. *See MPEP 2106(IV)(B)(1)(c)*, page 2100-14, citing *O'Reilly v. Morse*, 56 U.S. 62. Furthermore, the Official Gazette Notice of November 22, 2005, Annex IV(c) states:

On the other hand, from a technological standpoint, a signal encoded with functional descriptive material is similar to a computer-readable memory encoded with functional descriptive material, in that they both create a

functional interrelationship with a computer. In other words, a computer is able to execute the encoded functions, regardless of whether the format is a disk or a signal.

According to the above-quoted statement in the OG, the signal merely needs to be encoded with functional descriptive material in order to be similar to a computer-readable memory encoded with functional descriptive material. Clearly, Claims 12 and 13 include a signal encoded with functional descriptive material. Accordingly, the fact that Claims 12 and 13 are directed to a transmission medium do not render the claimed subject matter non-statutory.

Assuming for the sake of argument that the law requires something more than a useful, concrete, and tangible result (which, as described above, it does not), Applicants believe that the above-quoted statement in the OG is the proper interpretation of the law and decline to amend the claims at this time. If the rejection of Claims 12 and 13 under 35 U.S.C. § 101 were the only issue remaining in the Application, Applicants would consider amending one or more of Claims 12 and 13 according to a suggestion from the Examiner to expedite issuance of a patent from this Application. However, given that the Examiner has not provided such a suggestion and, as discussed above, Applicants' belief that Claims 12 and 13 recite patentable subject matter in their current form, Applicants have not made such amendments in this Response.

For at least these reasons, Applicants respectfully submit that Claims 12 and 13 recite patentable subject matter. Applicants respectfully request reconsideration and allowance of Claims 12 and 13.

The Examiner also rejects Claims 14-16 and 20 under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Applicants respectfully traverse these rejections.

In rejecting Claims 14-16 and 20 the Examiner's contends that simply because the claimed components may "merely be software" that they are directed to non-statutory subject matter. *Office Action*, p. 2. As the M.P.E.P. indicates, "[w]hen functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." M.P.E.P. ch. 2106.01 (Rev. 5, Aug. 2006). Moreover, "a claimed computer-readable medium encoded

with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory." M.P.E.P. ch. 2106.01(I) (Rev. 5, Aug. 2006). Furthermore, the Federal Circuit has held that 35 U.S.C. § 101 "explains that an invention includes 'any new and useful process, machine, manufacture or composition of matter.' Without question, software code alone qualifies as an invention eligible for patenting under these categories, at least as processes." *Eolas Technologies, Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338-39 (Fed. Cir. 2005) (citations omitted) (emphasis added). Thus, the fact that the claimed element may "merely be software" does not render the claimed subject matter non-statutory.

For at least these reasons, Claims 14-16 and 20 recite patentable subject matter. Applicants respectfully request reconsideration and allowance of Claims 14-16 and 20.

Section 102 Rejections

Claims 1, 4, and 10-16 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,192,512 issued to Chess ("*Chess*"). Applicants respectfully traverse this rejection. As amended, Claim 1 recites:

A method of detecting viral code in subject files, comprising:
creating an artificial memory region spanning one or more components
of the operating system;
emulating execution of at least a portion of computer executable code
in a subject file;
monitoring operating system calls by the emulated computer
executable code to detect an attempt by the emulated computer executable
code to access the artificial memory region; and
determining based on the attempt to access the artificial memory
region that the emulated computer executable code is viral.

Chess fails to disclose, expressly or inherently, every element of Claim 1. For example, *Chess* fails to disclose "monitoring operating system calls by the emulated computer executable code to detect an attempt by the emulated computer executable code to access the artificial memory region." Thus, as described further below, *Chess* fails to disclose, either expressly or inherently, every element of Claim 1.

More specifically, *Chess* discloses "an improved application subsystem that provides an API that includes a 'virtualized interface' to an interpreter." Col. 3, ll. 34-36. In

particular, “[b]y providing the API, an application subsystem can enable external programs to more easily examine programs written for its interpreter, and thus allow enhanced virus protection and security programs to be written to support its interpreter.” Col. 3, ll. 39-43.

Chess indicates that by “interpreting the source program in [a] virtual environment, the effect of the program’s execution can be determined in a relatively ‘safe’ mode, wherein any viral activity or characteristics can be readily ascertained.” Col. 4, ll. 42-48. As examples, *Chess* notes that “if it is found that the source program unexpectedly attempts to access a virtualized mass storage medium, and/or to create one or more copies of itself in a region of virtualized memory, or in a virtual file, then the external program can be informed of the potentially viral nature of the source program.” Col. 4, ll. 48-53. Nonetheless, *Chess* does not disclose “monitoring operating system calls” to detect such unexpected attempts to access the virtualized mass storage medium and/or attempts by the source program to copy itself. Thus, *Chess* fails to disclose “monitoring operating system calls by the emulated computer executable code to detect an attempt by the emulated computer executable code to access the artificial memory region” (emphasis added) as required by amended Claim 1.

As a result, *Chess* fails to disclose, expressly or inherently, every element of amended Claim 1. Claim 1 is thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of Claim 1 and its dependents.

Although of differing scope from Claim 1, Claims 10-12 and 14 include elements that, for reasons substantially similar to those discussed with respect to Claim 1, are not disclosed by *Chess*. Claims 10-12 and 14 are thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of Claims 10-12 and 14, and their respective dependents.

Section 103 Rejections

Claims 8, 9, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chess* in view of U.S. Patent No. 5,974,549 issued to Golan (“*Golan*”). Claims 8 and 9 depend from Claim 1, while Claim 20 depends from Claim 14. Claims 1 and 14 have been shown above to be allowable. Claims 8, 9, and 20 are thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of Claims 8, 9, and 20.

New Claims

Applicants add new Claims 21-23, which are fully supported by the Application as originally filed. Applicants request consideration and full allowance of Claims 21-23.

Conclusions

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending Claims. If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

No fees are believed to be due, however, the Commissioner is hereby authorized to charge any fees or to credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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